

Amendment and Response Under 37 C.F.R. 1.116

Applicant: Edward Fuergut et al.

Serial No.: 10/561,819

Filed: December 22, 2005

Docket No.: I431.139.101/FIN474PCT/US

Title: SENSOR COMPONENT AND PANEL USED FOR THE PRODUCTION THEREOF

REMARKS

The following remarks are made in response to the Final Office Action mailed December 4, 2008. Claims 20-31 have been withdrawn from consideration. Claims 1-13 have been cancelled. Claims 14-19, 32 and 33 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 103

Claims 14, 18-19 and 32 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Yamamoto et al. (US Publ. 2003/0094675 “Yamamoto”) in view of Ohta et al. (US 6,379,998 “Ohta”). Applicants respectfully traverse these rejections.

To establish *prima facie* obviousness, all claim limitations must be considered. MPEP 2143.03 (citing *In re Wilson*, 424 F.2d 1382, 1385, (CCPA 1970). The Office Action admits that Yamamoto fails to disclose each claim element. More specifically, the Office Action admits, “Yamamoto et al. do not disclose the active top of the sensor chip and the plastic plate having a planar overall top side.” Office Action at p. 3.

Independent claims 14 and 32 each include, “the active top side of the sensor chip and top sides of the contact areas, together with a top side of the plastic plate having a planar overall top side.” The Office Action further fails to identify a teaching or suggestion in Yamamoto of top sides of contact areas forming a planar overall top side with the active top of the sensor chip and the plastic plate.

Moreover, claim 14 recites “a rewiring structure with a rewiring layer having flat rewiring lines from the contact areas to external contact areas of the sensor components, the rewiring structure being arranged on the planar overall top side.”

Claim 32 is presented in “means-plus-function” language as provided by 35 USC 112, sixth paragraph. As such, the claim should be interpreted in view of the structure disclosed that corresponds to the “means” associated with the recited function. *See, In re Donaldson*, 16 F.3d 1189, 29 USPQ2d 1845 (Fed. Cir. 1994). Thus, the means for connecting the contact areas to the external contact areas of the sensor components includes a rewiring structure with a rewiring

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layer having flat rewiring lines arranged on the planar overall top side as disclosed in the drawings and written description of the present application.

The Office Action fails to identify a disclosure in Yamamoto of the claimed rewiring structure, but rather, simply states that Yamamoto discloses “a rewiring layer having rewiring lines from the contact areas 1b to the external contact areas 2 of the sensor components 1a, the rewiring structure being arranged on the overall top side.” Office Action at p. 2. There is no mention in the rejections of claims 14 and 32 of the limitations regarding, for example, flat rewiring lines.

It is well settled that, to establish *prima facie* obviousness, there must be motivation to the disclosure of a prior art reference using the teachings of another reference. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. MPEP 2143.01 (citing *In re Gordon*, 733 F.2d 900 (Fed. Cir. 1984)).

Regarding the active top side of the sensor chip and top sides of the contact areas, together with a top side of the plastic plate having a planar overall top side, the Office Action appears to rely on the disclosure of Ohta. However, Ohta is related to a special method for fabricating a semiconductor device, wherein semiconductor chips 33 are embedded in a semiconductor substrate 31 by providing shallow grooves 32 in the semiconductor substrate 31 using anisotropic etching, and fitting the semiconductor chips 33 in the grooves 32, such that the side walls of the grooves and the side walls of the semiconductor chips have the same (111) crystal face. For example, see figures 21-26 of Ohta in connection with the related parts of the written description.

The Ohta disclosure is not related to the problem of embedding a sensor chip in a plastic plate, which requires methods having differences than those for arranging semiconductor chips within a semiconductor substrate. In particular, the method disclosed by Ohta using anisotropic etching is not applicable for embedding a sensor chip in a plastic plate, since the method of Ohta requires a crystalline a material for the anisotropic etching.

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Thus, a plastic plate cannot be used as a material for the etching method disclosed in the Ohta reference, and thus would render the device being modified unsatisfactory for its intended purpose. Therefore, one of ordinary skill in the art would not have motivation to modify the disclosure of Yamamoto based on the teachings of Ohta.

Still further, the Office Action states that Ohta discloses the substrate and the embedded chip forming a smooth flattening layer permitting the wirings to be made easily, citing column 24, lines 15 to 19 of Ohta. However, the cited portion is directed to the case where a level difference occurs between the embedded chip 52 and the body chip 53 and teaches that the flattening layer 60 can smooth the level difference, thus permitting the wirings to be surely made. See Fig. 56. Hence, Ohta appears to actually teach away from providing a planar overall top side for the embedded chip 52, the body chip 53 and the connection wirings 54, since level differences between the individual components may easily be compensated for by the flattening layer 60.

Thus, the Office Action fails to establish *prima facie* obviousness of independent claims 14 and 32, as well as claims 18 and 19 which depend from claim 14. Claims 14, 18, 19 and 32 are thus believed to be in condition for allowance.

Claims 15-17 and 33 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Yamamoto et al. (US Publ. 2003/0094675) modified by Ohta et al. (US 6,379,998) as applied to claim 14 above, and further in view of Fillion et al. (US 5,353,498).

Claims 15-17 and 33 all ultimately depend from either claim 14 or claim 32, which are allowable as set forth above. Claims 15-17 and 33 are therefore allowable for at least the same reasons.

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CONCLUSION

In view of the above, Applicant respectfully submits that all of the pending claims are in form for allowance. Therefore, reconsideration and withdrawal of the rejections and allowance of claims are respectfully requested.

No fees are required under 37 C.F.R. 1.16(h)(i). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

Any inquiry regarding this Amendment and Response should be directed to Mark L. Gleason at Telephone No. (612) 767-2503, Facsimile No. (612) 573-2005. In addition, all correspondence should continue to be directed to the following address:

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